

Figure 1

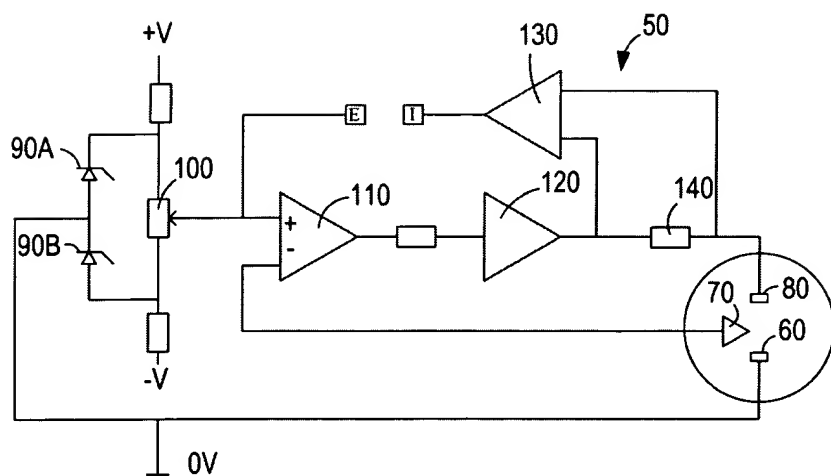


Figure 2

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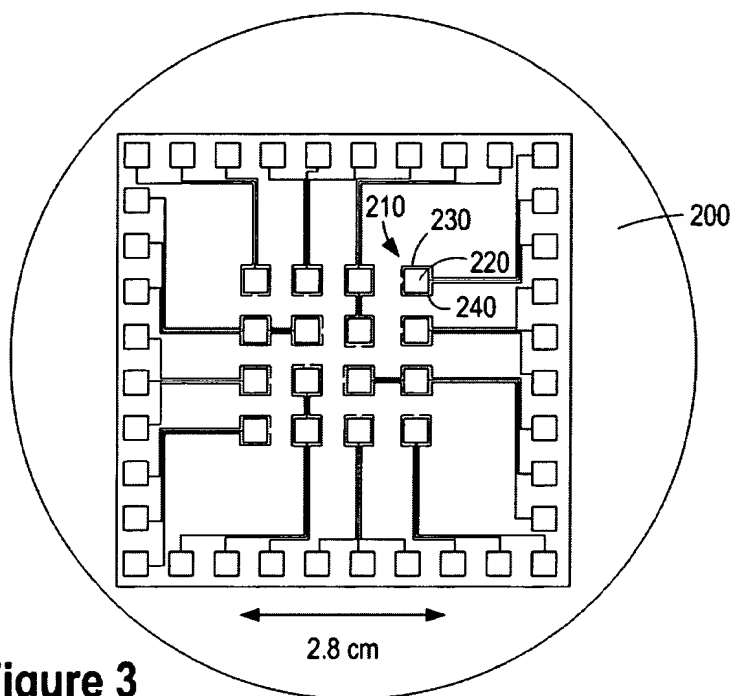


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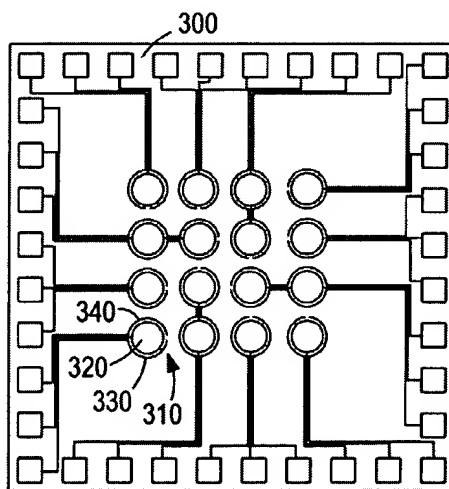


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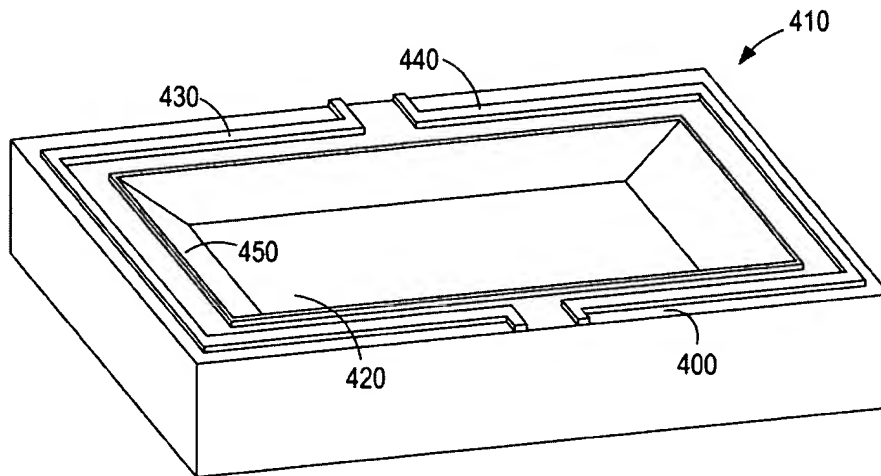


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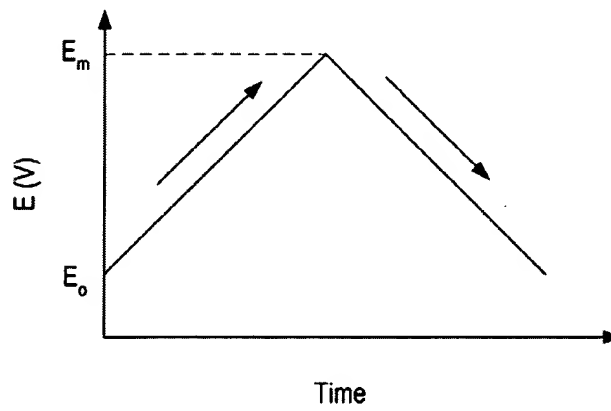


Figure 6

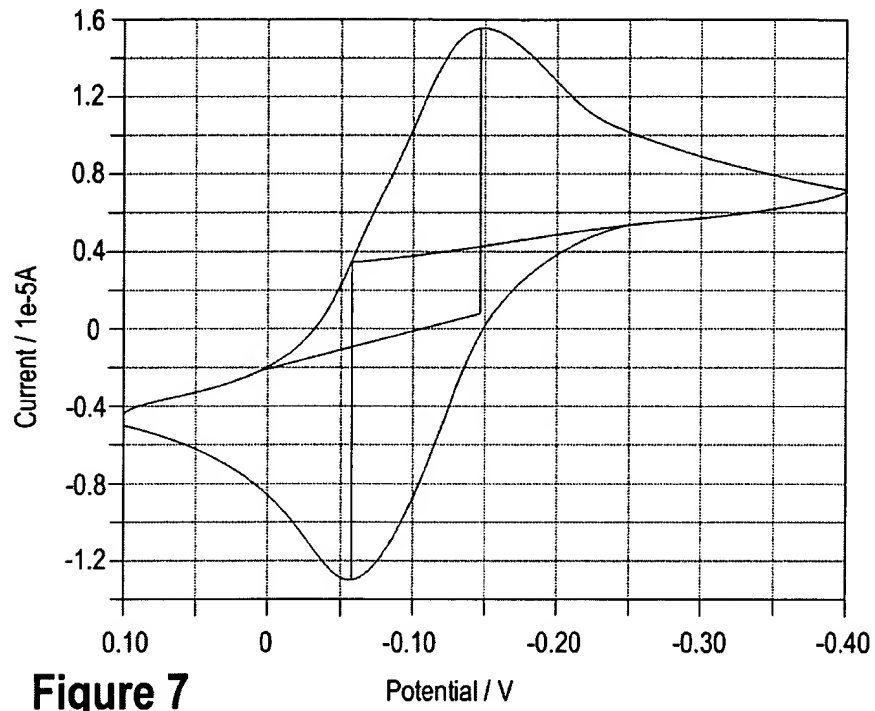


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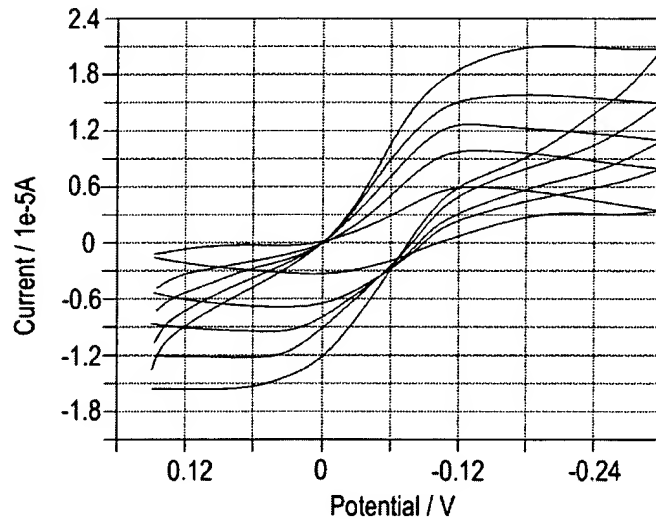


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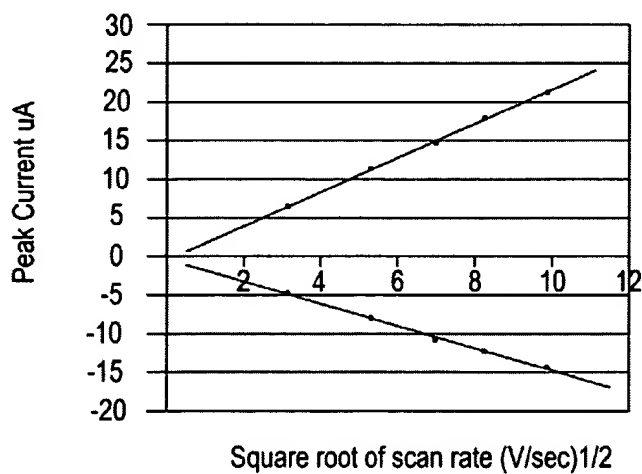


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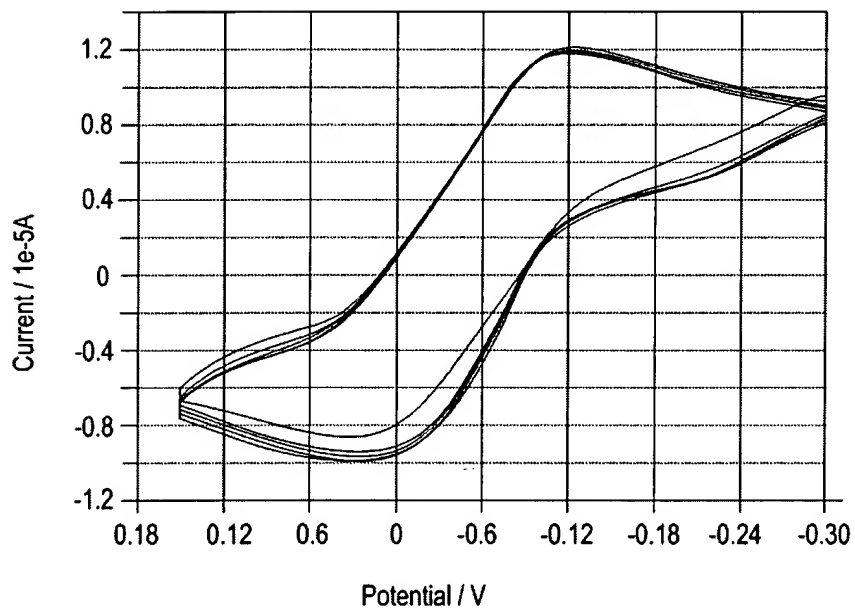
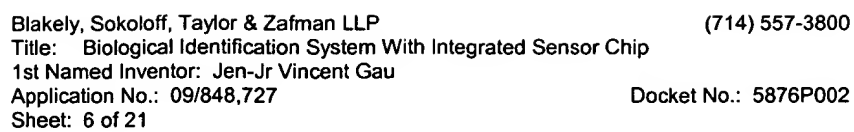


Figure 10

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10:00 AM
Jen-Jr Vincent Gau



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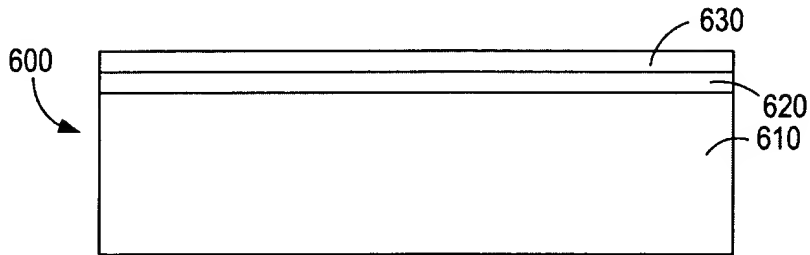


Figure 14

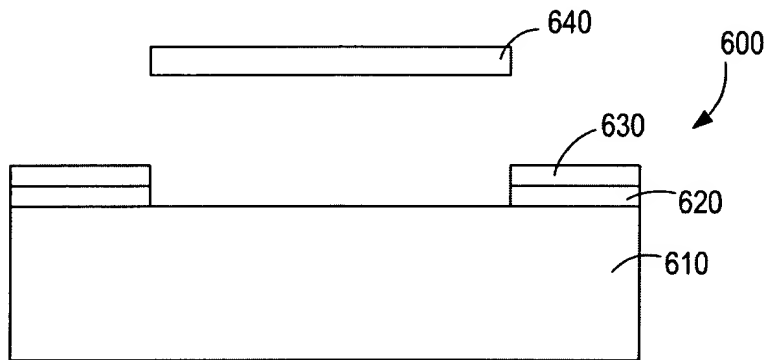


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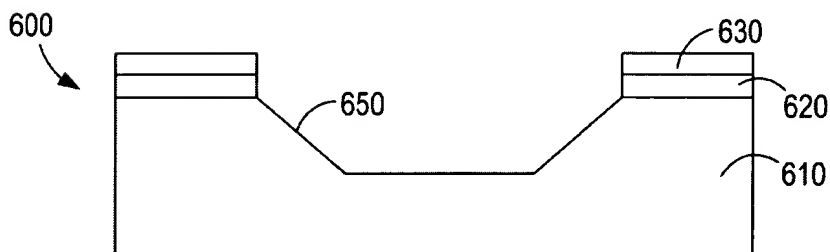


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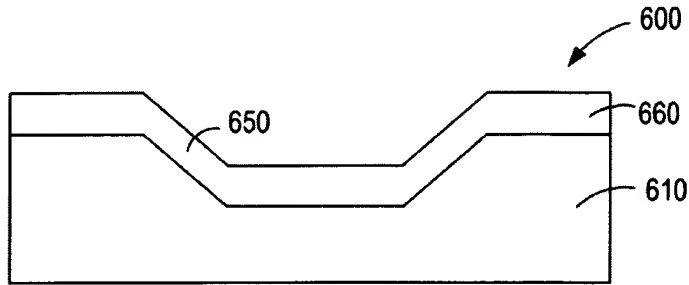


Figure 17

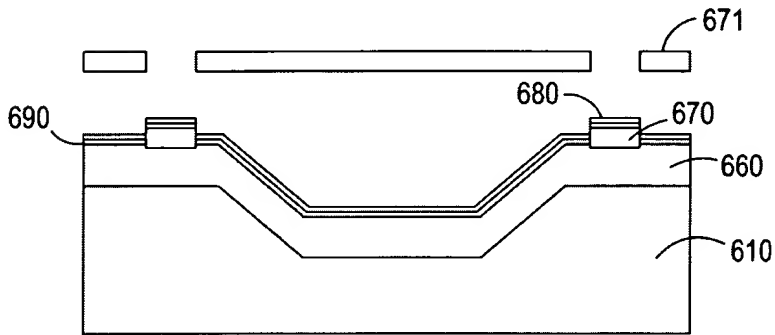


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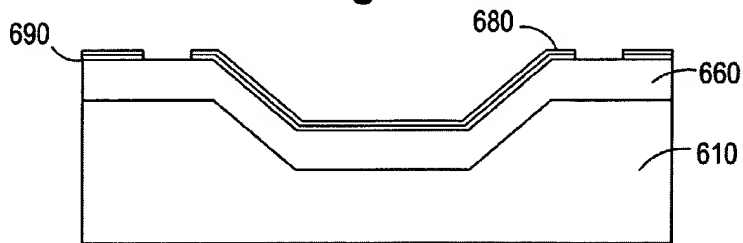


Figure 19

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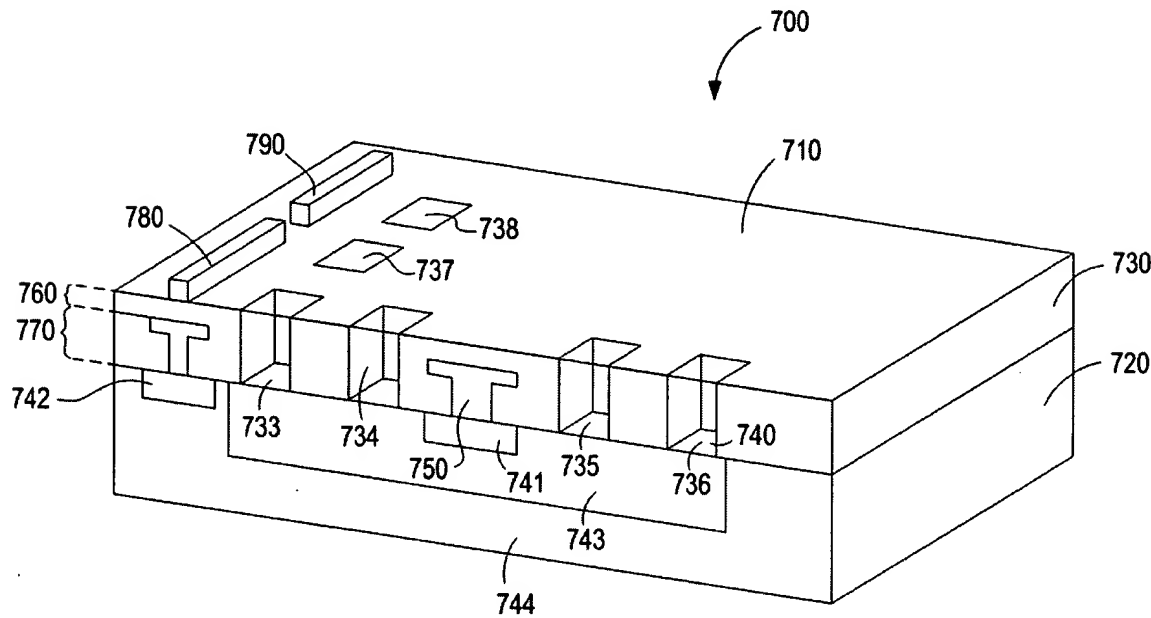


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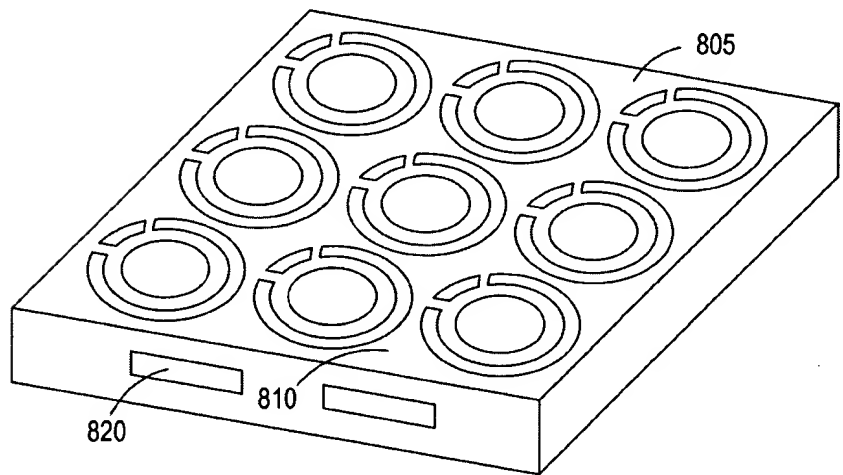


Figure 23

Figure 24



Blakely, Sokoloff, Taylor & Zafman LLP
Title: Biological Identification System With Integrated Sensor Chip
1st Named Inventor: Jen-Jr Vincent Gau
Application No.: 09/848,727
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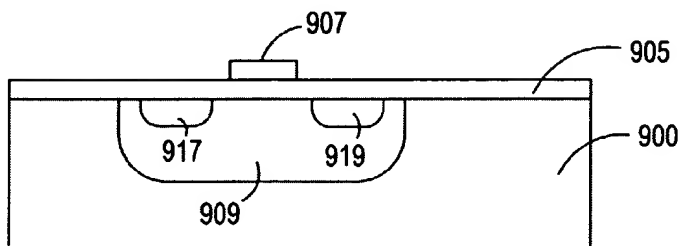


Figure 25

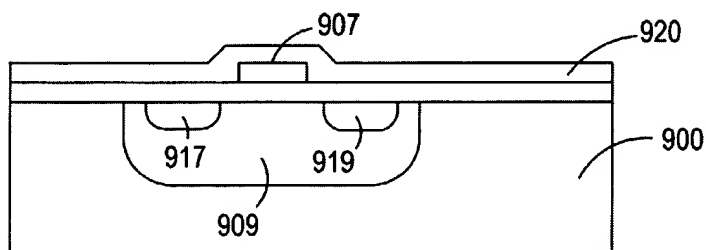


Figure 26

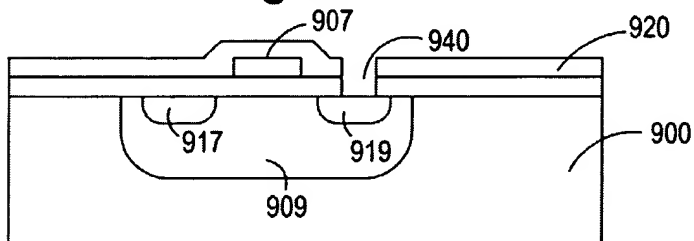


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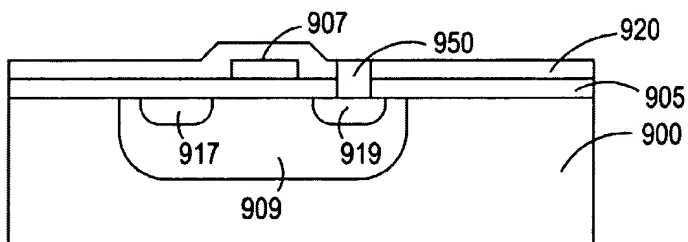


Figure 28



Blakely, Sokoloff, Taylor & Zafman LLP
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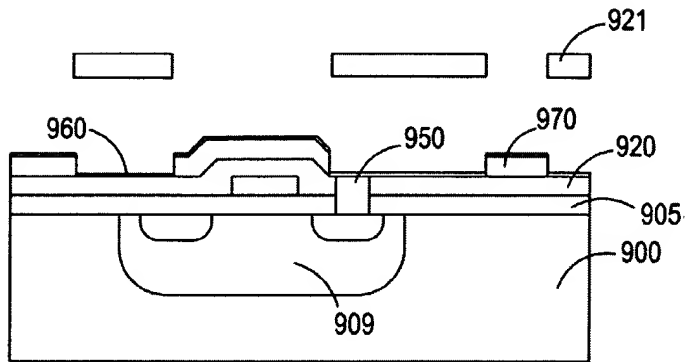


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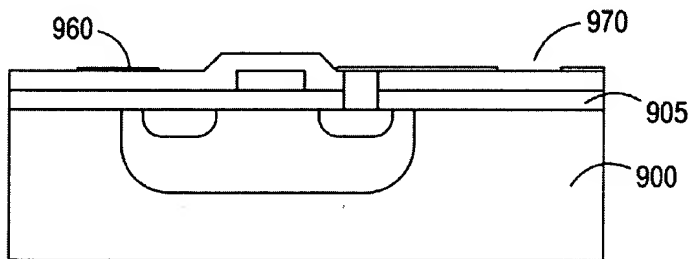


Figure 30



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1st Named Inventor: Jen-Jr Vincent Gau
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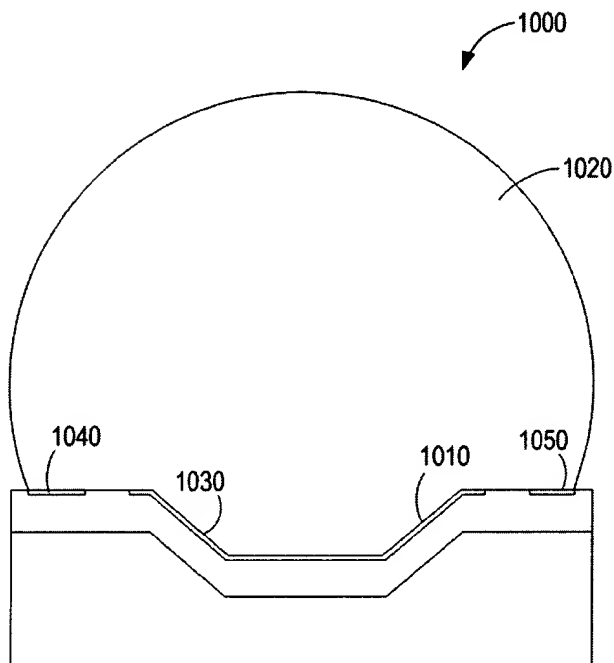


Figure 31



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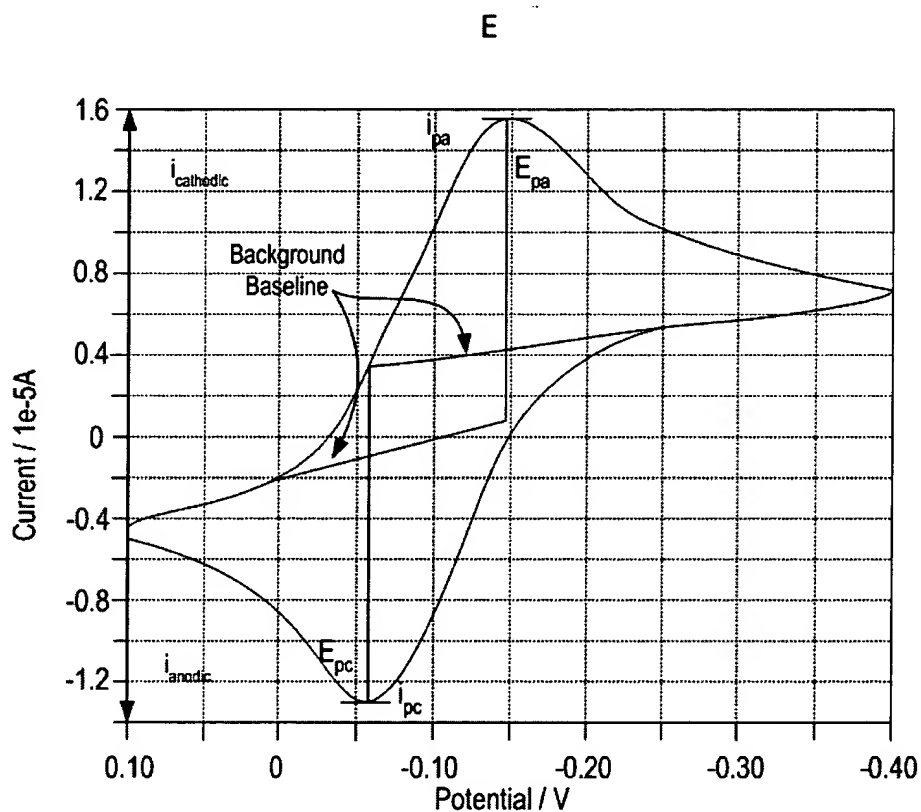


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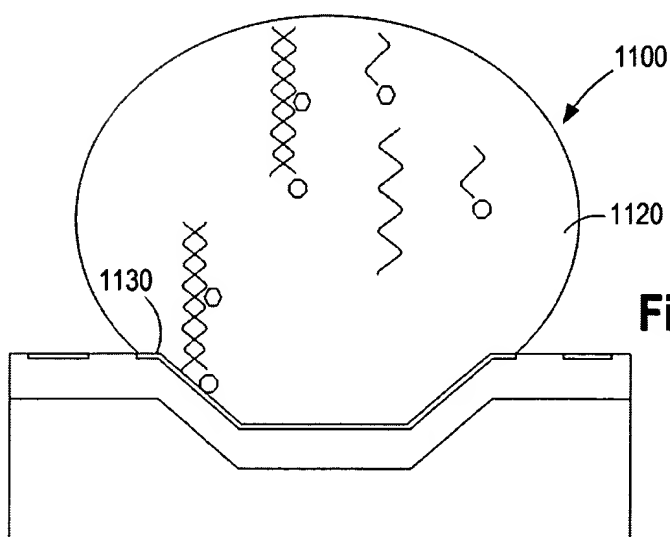


Figure 33



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Figure 34

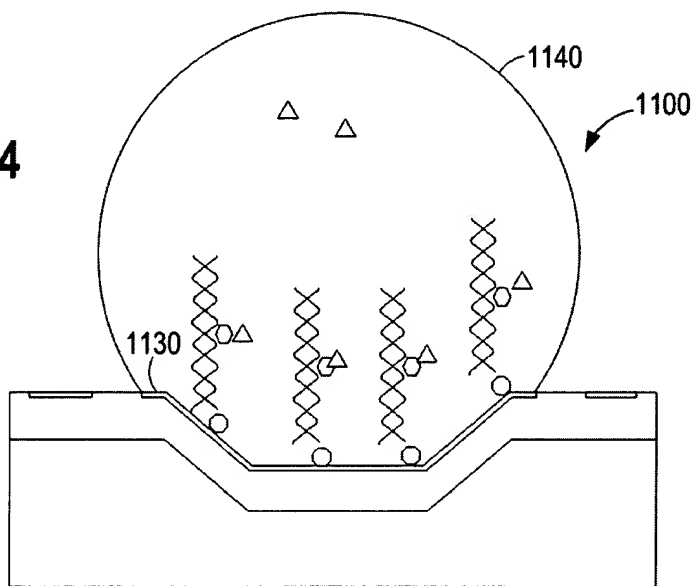
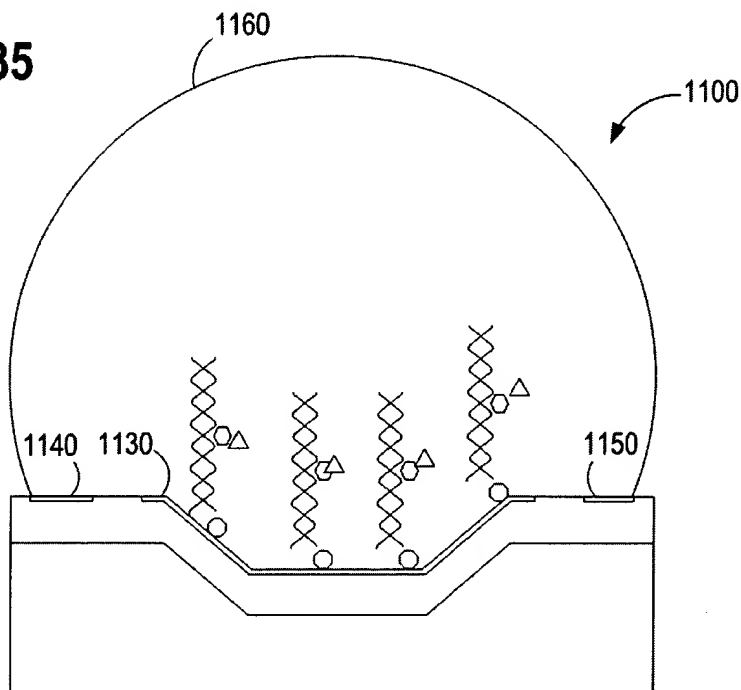


Figure 35





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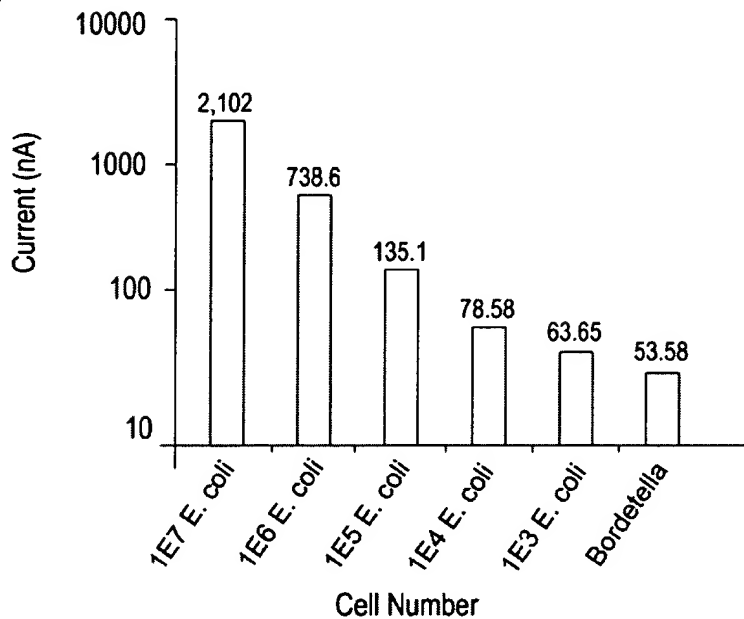
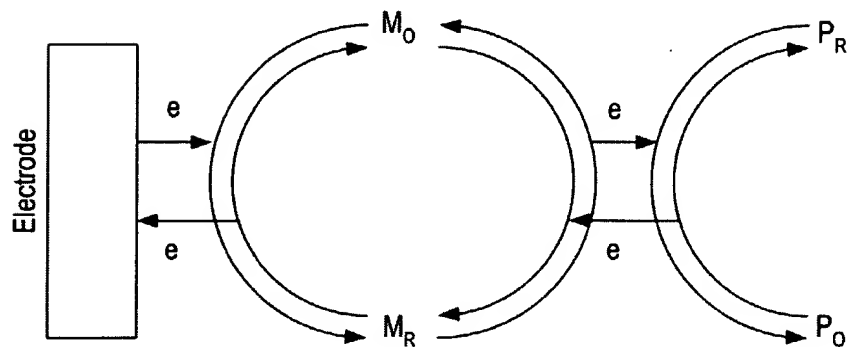


Figure 36



P_R : Reduced Peroxidase P_O : Oxidized Peroxidase
 M_O : Oxidized Mediator M_R : Reduced Mediator

Figure 37



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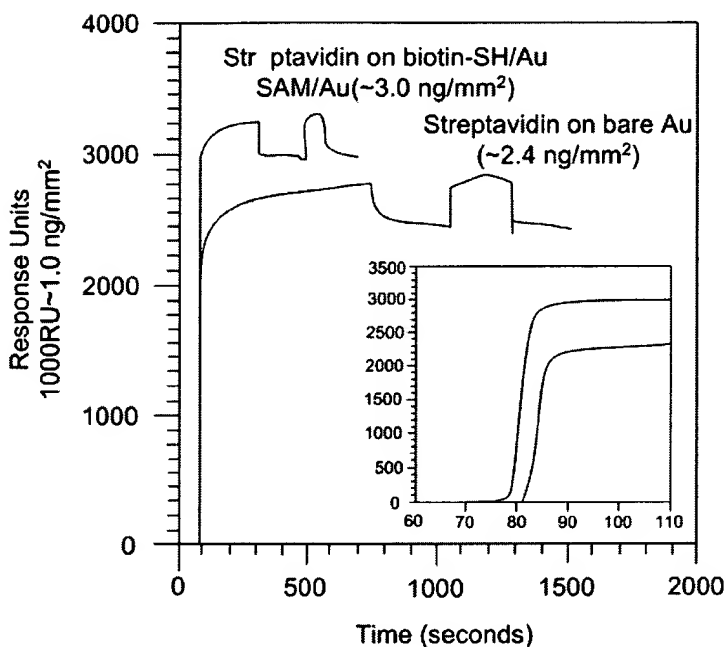


Figure 38

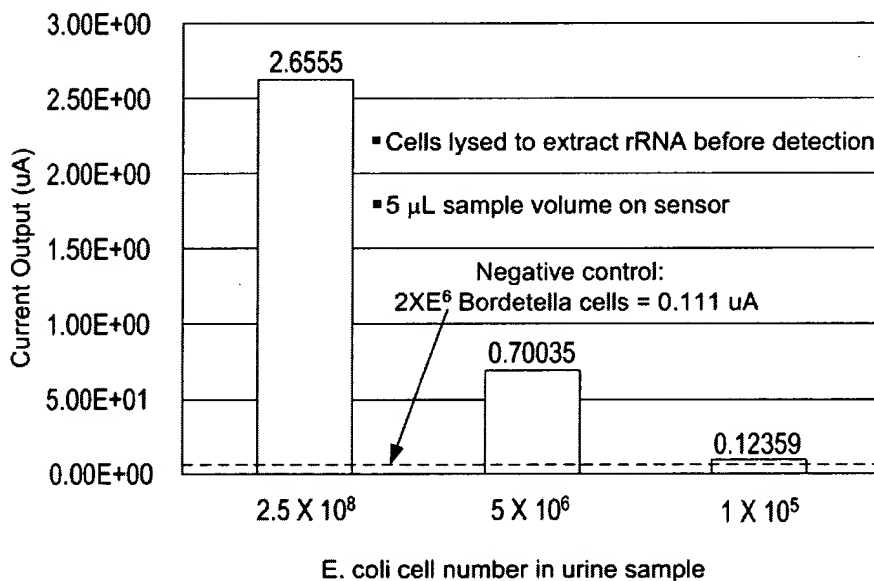
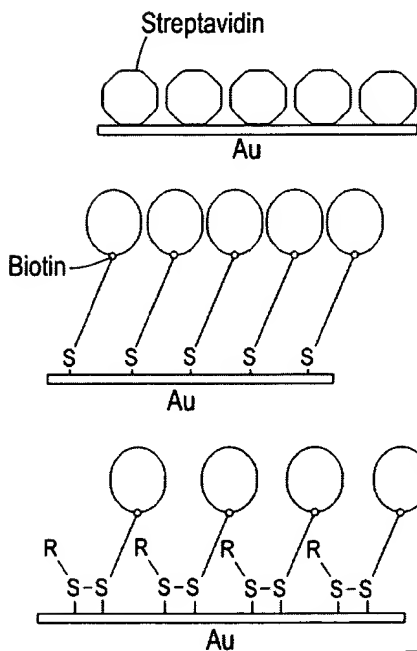
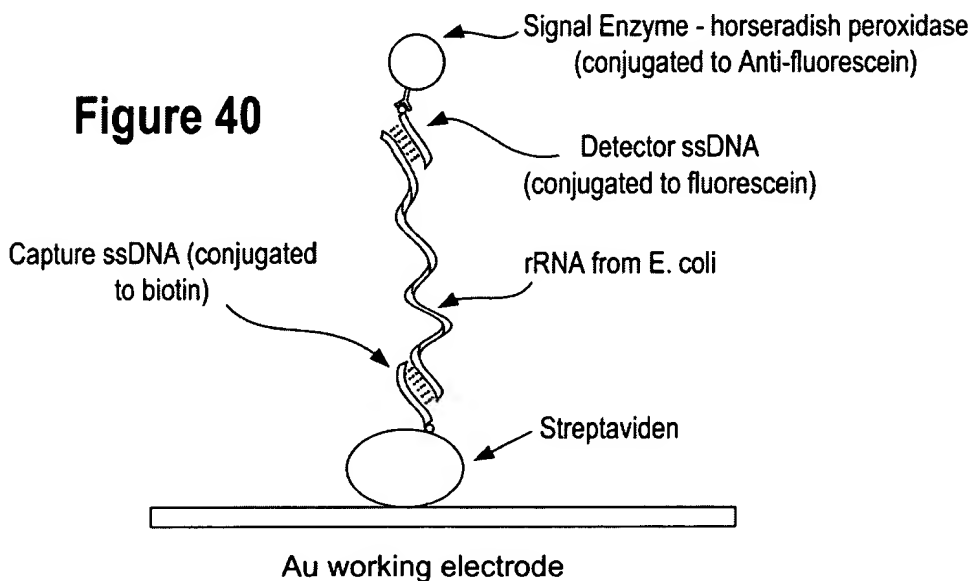


Figure 39



Figure 40



Approach 1. SAM of Streptavidin on bare Au

Approach 2. Streptavidin bound on SAM of biotin-DAD-C12-SH (12-mercapto(8-biotinamide-3, 6-dioxaoctyl)dodecanamide)



Approach 3. Streptavidin bound on SAM of biotin-HPDP, (N-[6-(biotinamido)hexyl]-3'-(2'-pyridyldithio)propionamide)

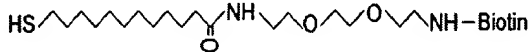


Figure 41



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Comparison of various reagents for the desorption of streptavidin from surface as determined by surface plasmon resonance

Treatment Condition	Streptavidin on Bare Au ~2400 RU deposited Loss in Signal (RU)		Streptavidin on biotin-DAD-C12-SH/Au ~3000 RU deposited Loss in Signal (RU)		Streptavidin on biotin-HPDP/Au ~1700 RU deposited Loss in Signal (RU)	
1.0 M KCl	0	0	0	0	0	0
8 M Urea	280(12%)	370(15%)	790(26%)	1050(35%)	360(21%)	300(18%)
0.5% SDS	40(2%)	150(6%)	390(13%)	230(8%)	330(19%)	690(40%)
0.1 M HCl	0	0	0	0	0	0
0.1 NaOH	400(17%)	550(23%)	630(21%)	690(23%)	400(24%)	200(12%)
40% Formamide	0	0	0	0	0	0

Figure 42

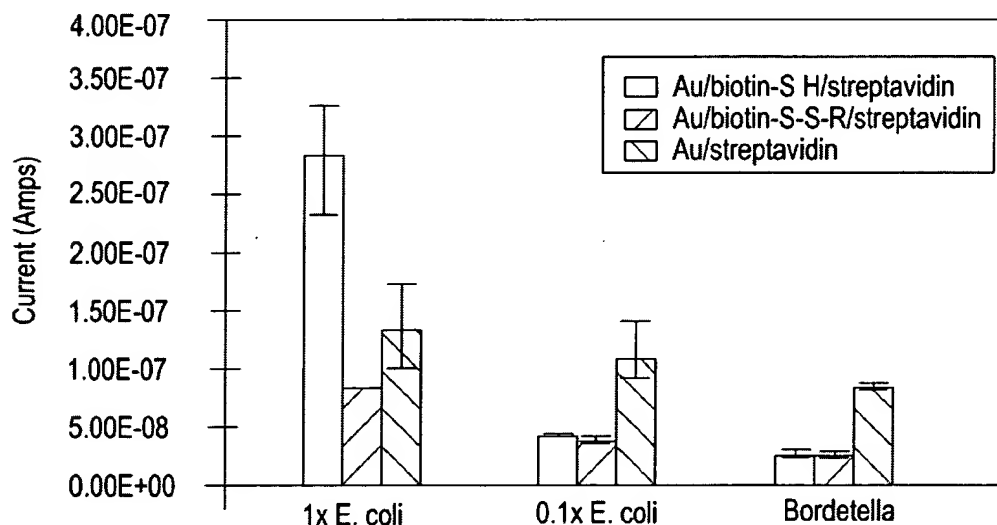


Figure 43



Blakely, Sokoloff, Taylor & Zafman LLP
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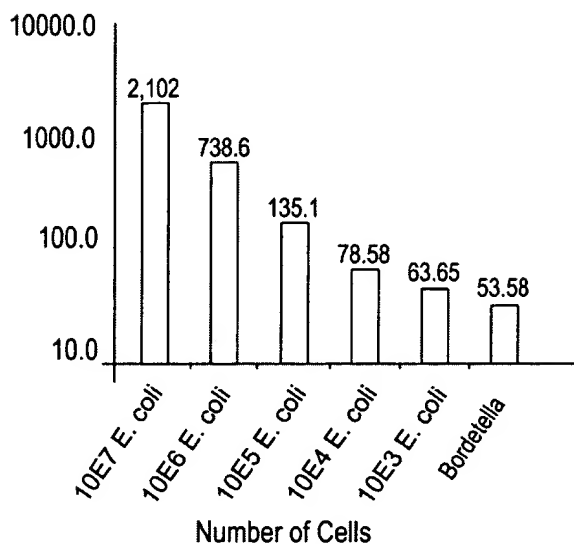


Figure 44